

## OIB - HU-25C Guardian 10/08/15 Science Report

**Aircraft:**

[HU-25A Guardian #525](#) ([See full schedule](#))

**Date:**

Thursday, October 8, 2015

**Mission:**

OIB

**Mission Location:**

Kangerlussuaq, Greenland

**Mission Summary:**

Mission: Falcon Southwest Coastal A (priority: high)

This mission is one of three (with Falcon Southwest Coastal B and C), which together re-fly most of the the ?Southwest Coastal A and B? missions flown in Spring 2015. These three flights work together in an interlaced (working upward from the coast) manner. This particular flight concentrates on the first and fourth lowermost of the coast-parallel lines, plus two additional lines covering a southern lobe of the ice sheet.

We were fortunate with weather on this our first day of flight operations in southern Greenland, with clear skies in Kangerlussuaq and over much of the southwestern portion of the ice sheet. We chose to fly the southwest sector first because we expected an oncoming weather system from Labrador and the Davis Strait to begin covering this area with cirrus clouds as the morning wore on. We began flying the mission at a lower-than-usual 29,000' MSL in order to improve our chances of staying below the building cirrus layer. The clouds we encountered in the south, however, were lower than we expected, with the bottoms often around 20,000' MSL. So we dropped to 19,000' MSL and successfully collected data over approximately 85% of the flight line. This approach worked for this particular mission, which is one of our shorter flights. However, flying this low adversely affects our range and would have caused us to shorten the mission had it been a longer one, or make a fuel stop if a nearby airport were available.

All instruments performed well today. Prior to takeoff this morning, we swapped the lens on the FLIR camera from a 45 deg field-of-view (FOV) lens to a 15 deg FOV version. This FOV should be a better match to the swath of the ATM lidar and the DMS camera, and will also provide improved image resolution within the smaller FOV.

We conducted a ramp pass at 4000' MSL.

Data volumes:

DMS: 26.8 Gb

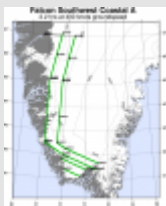
Narrow Swath ATM: 34 Gb

FLIR: 1.9 Gb

total data collection time: 3.7 hrs

**Images:**

### Map of Falcon - Southwest Coastal A



[Read more](#)

### Kangiata Nunaata Sermia



[Read more](#)

## Southwest Greenland fjords



[Read more](#)

### Submitted by:

John Sonntag on 10/08/15

### Related Flight Report:

## HU-25C Guardian 10/08/15

### Flight Number:

OIB2015 Arctic Southwest Coastal A

### Payload Configuration:

ATM & DMS

### Nav Data Collected:

No

### Total Flight Time:

3.8 hours

### Submitted by:

Luci Crittenden on 10/08/15

### Flight Segments:

<b>From:</b>	BGSF	<b>To:</b>	BGSF
<b>Start:</b>	10/08/15 10:25 Z	<b>Finish:</b>	10/08/15 14:15 Z
<b>Flight Time:</b>	3.8 hours		
<b>Log Number:</b>	<a href="#">16F002</a>	<b>PI:</b>	John Woods
<b>Funding Source:</b>	Thomas Wagner - NASA - SMD - ESD Cryosphere & International Polar Year		
<b>Purpose of Flight:</b>	Science		
<b>Comments:</b>	OIB flew its first science mission out of Kangerlussuaq today - the Southwest Coastal A flight plan. The HU-25 turned for a second flight of the day.		

### Flight Hour Summary:

	15F005	16F002
<b>Flight Hours Approved in SOFRS</b>	100	
<b>Flight Hours Previously Approved</b>		67.4
<b>Total Used</b>	32.6	65.3
<b>Total Remaining</b>		2.1

### 16F002 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining
<a href="#">10/05/15</a>	OIB2015 Arctic Sea Ice Central	Science	3.6	3.6	63.8
<a href="#">10/05/15</a>	OIB2015 Arctic Sea Ice East	Science	3.8	7.4	60
<a href="#">10/06/15</a>	OIB2015 Arctic Ice-Sat2 North	Science	4	11.4	56
<a href="#">10/07/15</a>	OIB2015 Arctic Transit Thule to Kangerlussuaq	Transit	2	13.4	54
<a href="#">10/08/15</a>	OIB2015 Arctic Southwest Coastal A	Science	3.8	17.2	50.2
<a href="#">10/08/15</a>	OIB2015 Arctic Thomas-Jakobshavn 01	Science	3.7	20.9	46.5
<a href="#">10/09/15</a>	OIB2015 Arctic Umanaq B	Science	3.9	24.8	42.6

<a href="#">10/13/15</a>	OIB2015 Arctic Jakobshavn Equip Store	Science	2.9	27.7	39.7
<a href="#">10/13/15</a>	OIB2015 Arctic Southeast Coastal A	Science	3.6	31.3	36.1
<a href="#">10/18/15</a>	OIB2015 Arctic Southeast Coastal B	Science	4.1	35.4	32
<a href="#">10/19/15</a>	OIB2015 Arctic Helheim-Kangerdlugussuaq	Science	3.7	39.1	28.3
<a href="#">10/19/15</a>	OIB2015 Arctic Helheim-Kangerdlugussuaq Gap B	Science	3.9	43	24.4
<a href="#">10/20/15</a>	OIB2015 Arctic Jakobshavn Mop-Up	Science	3.7	46.7	20.7
<a href="#">10/20/15</a>	OIB2015 Arctic Southwest Coastal B	Science	3.7	50.4	17
<a href="#">10/21/15</a>	OIB2015 Arctic Southwest Coastal C	Science	3.4	53.8	13.6
<a href="#">10/21/15</a>	OIB2015 Arctic K-EGIG-Summit	Science	3.7	57.5	9.9
<a href="#">10/22/15</a>	OIB2015 Arctic Mopup South	Science	2	59.5	7.9
<a href="#">10/22/15</a>	OIB2015 Arctic Ferry BGSF-CYYR	Ferry	2.2	61.7	5.7
<a href="#">10/23/15</a>	OIB2015 Arctic Ferry CYYR-KRIC	Ferry	3.3	65	2.4
<a href="#">10/23/15</a>	OIB2015 Arctic Ferry CYYR-KRIC	Ferry	0.3	65.3	2.1

**Source URL:** [https://airbornescience.nasa.gov/science\\_reports/OIB\\_-\\_HU-25C\\_Guardian\\_10\\_08\\_15\\_Science\\_Report](https://airbornescience.nasa.gov/science_reports/OIB_-_HU-25C_Guardian_10_08_15_Science_Report)

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*Flight Reports began being entered into this system as of 2012 flights. If there were flights flown under an earlier log number the flight reports are not available online.*

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining
<a href="#">09/15/15</a>	OIB #1	Check	2.7	2.7	97.3
<a href="#">09/20/15</a>	OIB #2, 3, 4	Ferry	2.7	5.4	94.6
<a href="#">09/21/15</a>	OIB #2, 3, 4	Ferry	2.3	7.7	92.3
<a href="#">09/21/15</a>	OIB #2, 3, 4	Ferry	2	9.7	90.3
<a href="#">09/23/15</a>	OIB2015 Arctic North Central Gap 02	Science	3.9	13.6	86.4
<a href="#">09/24/15</a>	OIB2015 Arctic Northwest Coastal A	Science	3.7	17.3	82.7
<a href="#">09/25/15</a>	OIB2015 Arctic Northwest Coastal B	Science	3.8	21.1	78.9
<a href="#">09/28/15</a>	OIB2015 Arctic Sea Ice West	Science	3.7	24.8	75.2
<a href="#">09/30/15</a>	OIB2015 Arctic North Central Gap 01	Science	3.9	28.7	71.3
<a href="#">09/30/15</a>	OIB2015 Arctic Zachariae-79N	Science	3.9	32.6	67.4